Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-60 (Canceled)

61. (New) A method comprising:

during configuration of a communication channel, setting a coding rate of an encoder to an initial value;

adjusting the coding rate at the encoder by varying the coding rate from the initial value to an adjusted value; and

encoding data input into the encoder at a coding rate having the adjusted value,

wherein the method is implemented during at least one of variable data rate mode and flexible data rate mode.

62. (New) The method of claim 61, wherein the encoder is a turbo encoder.

63. (New) The method of claim 61, wherein said adjusting the coding rate of the encoder comprises puncturing data encoded at a first coding rate of the encoder to effectuate a second coding rate in a puncturing block of the encoder.

64. (New) The method of claim 63, wherein:

the first coding rate is 1/5; and

the second coding rate is one of 1/2, 1/3, and 1/4.

65. (New) The method of claim 61, wherein data input into the encoder comprises at least one of an information bit, a cyclic redundancy check bit, a tail bit, and a reserve bit.

66. (New) The method of claim 61, wherein the coding rate of the encoder is varied according to a ratio of a size of a block interleaver and a number of bits input into the encoder over a predetermined amount of time.

67. (New) The method of claim 66, wherein:

the coding rate is varied to 1/3 if the ratio is greater than 2 and less than or equal to 3;

the coding rate is varied to 1/4 if the ratio is greater than 3 and less than 4; and

the coding rate is varied to 1/5 if the ratio is greater than or equal to 4 and less than 5.

68. (New) The method of claim 67, wherein the predetermined amount of time is 20 ms.

69. (New) The method of claim 61, comprising rate matching an output of the encoder according to a size of a block interleaver.

70. (New) The method of claim 69, wherein:

said rate matching comprises applying a puncturing algorithm to the output of the encoder for each symbol group;

each symbol group is data output from the encoder for data that is input into the encoder over a predetermined period of time;

the data output from the encoder is divided into even symbol groups and odd symbol groups; and

different puncturing patterns are applied to even symbol groups than to odd symbol groups.

71. (New) The method of claim 69, wherein said rate matching comprises puncturing the output of the encoder according to a puncturing algorithm.

72. (New) The method of claim 71, wherein the puncturing is applied to symbol groups of the output of the encoder having indices 2j and 2j+1 for $(j \bullet k) \bmod J < K$ where $j=0$ to $J-1$, $J = \lfloor I/2 \rfloor$ and $K = \lfloor (L - N) / 2 \rfloor$, I is a number of data bits per frame, L is a number of the encoded data bits wherein the data bits include tail bits, N is the size of block interleaver, and the encoder is a turbo encoder.

73. (New) The method of claim 72, wherein the symbol groups of output of the encoder for the data bits except the tail bits having indices 2j and 2j+1 are applied to each different puncturing patterns.

74. (New) The method of claim 72, wherein the symbol groups of output of the encoder for the tail bits having indices 2j and 2j+1 are applied to each same puncturing patterns.

75. (New) The method of claim 71, wherein the puncturing algorithm is according to:

Pattern range	2I<N<=3I n=3		3I<N<4I n=4		4I<=N<5I n=5	
	P_0	P_1	P_0	P_1	P_0	P_1
Puncturing pattern	110	101	1101	1101	11101	11011
Tail puncturing pattern	101	101	1011	1011	11011	11011

76. (New) The method of claim 71, wherein the puncturing algorithm is according to:

Pattern range	2I<N<=3I n=3, p=2, u=2		3I<N<4I n=4, p=4, u=3			4I<=N<5I n=5, p=2, u=2	
	P_0	P_1	P_0	P_1	P_2	P_0	P_1
Puncturing pattern	110	101	1101	1101	1010	11101	11011
Tail puncturing pattern	101	101	1011	1011	1010	11011	11011

77. (New) The method of claim 71, wherein the puncturing algorithm is according to:

Pattern range	2I<N<=3I n=3, p=2, u=2		3I<N<4I n=4, p=4, u=3			4I<=N<5I n=5, p=2, u=2	
	P_0	P_1	P_0	P_1	P_2	P_0	P_1
Puncturing pattern	110	101	1101	1111	1010	11101	11011
Tail puncturing pattern	101	101	1011	1111	1010	11011	11011

78. (New) The method of claim 71, wherein the puncturing algorithm is according to:

Pattern range	2I<N<=3I n=3		3I<N<4I n=4			4I<=N<5I n=5	
	P_0	P_1	P_0	P_1	P_2	P_0	P_1
Data puncturing pattern	110	101	1101	1110	1011	11101	11011
Tail puncturing pattern	101	101	1011	1011	1010	11011	11011

79. (New) The method of claim 69, wherein:

the output of the encoder comprises at least one encoded data bit and at least one encoded tail bit;

said rate matching comprises applying a first puncturing pattern and a second

puncturing pattern to said at least one encoded data bit according the coding rate; and

said rate matching comprises applying a third puncturing pattern and a fourth puncturing pattern to said at least one encoded tail bit according to the coding rate.

80. (New) The method of claim 79, wherein:

the first puncturing pattern is applied to even groups of said at least one encoded data bit;

the second puncturing pattern is applied to odd groups of said at least one encoded data bit;

the third puncturing pattern is applied to even groups of said at least one encoded tail bit; and

the fourth puncturing pattern is applied to odd groups of said at least one encoded tail bit.

81. (New) The method of claim 80, wherein if the coding rate is 1/3:

the first puncturing pattern is "110";

the second puncturing pattern is "101";

the third puncturing pattern is "101"; and

the fourth puncturing pattern is "101".

82. (New) The method of claim 80, wherein if the coding rate is 1/4:

the third puncturing pattern is "1011"; and

the fourth puncturing pattern is "1011".

83. (New) The method of claim 80, wherein if the coding rate is 1/5:

the first puncturing pattern is "11101";

the second puncturing pattern is "11011";

the third puncturing pattern is "11011"; and

the fourth puncturing pattern is "11011".

84. (New) An apparatus configured to implement the method of claim 61.

85. (New) The apparatus of claim 84, wherein the apparatus is a mobile station.

86. (New) The apparatus of claim 84, wherein the apparatus is a base station.

87. (New) A method comprising:

encoding transmission data;

rate matching encoded transmission data; and

block interleaving rate matched encoded transmission data,

wherein a coding rate is variable according to a data rate of the transmission data and unit size of said block interleaving.

88. (New) The method of claim 87, wherein said variable coding rate is accomplished by puncturing data encoded at a first coding rate of an encoder to effectuate a second coding rate in a puncturing block of the encoder.

89. (New) The method of claim 88, wherein the encoder is a turbo encoder.

90. (New) The method of claim 88, wherein:

the first coding rate is 1/5; and

the second coding rate is one of 1/2, 1/3, and 1/4.

91. (New) The method of claim 87, wherein said transmission data comprises at least one of an information bit, a cyclic redundancy check bit, a tail bit, and a reserve bit.

92. (New) The method of claim 87, wherein the method is implemented in at least one of variable data rate mode or flexible data rate mode.

93. (New) The method of claim 87, wherein said rate matching is according to a size of a block interleaver.

94. (New) The method of claim 87, wherein:

said rate matching comprises applying a puncturing algorithm to the output of an encoder for each symbol group;

each symbol group is data output from the encoder for data that is input into the encoder over a predetermined period of time;

the data output from the encoder is divided into even groups and odd groups; and

different puncturing patterns are applied to even groups than to odd groups.

95. (New) The method of claim 87, wherein the coding rate of an encoder is varied according to a ratio of a size of a block interleaver and a number of bits input into the encoder over a predetermined amount of time.

96. (New) The method of claim 95, wherein:

the coding rate is varied to 1/3 if the ratio is greater than 2 and less than or equal to 3;

the coding rate is varied to 1/4 if the ratio is greater than 3 and less than 4; and

the coding rate is varied to 1/5 if the ratio is greater than or equal to 4 and less than 5.

97. (New) The method of claim 96, wherein the predetermined amount of time is 20 ms.

98. (New) The method of claim 87, wherein said rate matching comprises puncturing the output of the encoder.

99. (New) The method of claim 98, wherein said puncturing the output of the encoder is according to a puncturing algorithm.

100. (New) The method of claim 99, wherein the puncturing is applied to symbol groups of the output of the encoder having indices 2j and 2j+1 for $(j \bullet k) \bmod J < K$ where $j=0$ to $J-1$, $J = \lfloor I/2 \rfloor$ and $K = \lfloor (L - N) / 2 \rfloor$, I is a number of data bits per frame, L is a number of the encoded data bits wherein the data bits include tail bits, N is the size of a block interleaver, the encoder is a turbo encoder.

101. (New) The method of claim 99, wherein the puncturing algorithm is according to:

Pattern range	2I<N<=3I n=3		3I<N<4I n=4		4I<=N<5I n=5	
	P_0	P_1	P_0	P_1	P_0	P_1
Puncturing pattern	110	101	1101	1101	11101	11011
Tail puncturing pattern	101	101	1011	1011	11011	11011

102. (New) The method of claim 87, wherein:

said encoding transmission data comprises encoding at least one data bit and encoding at least one tail bit;

said rate matching comprises applying a first puncturing pattern and a second puncturing pattern to said at least one encoded data bit according to the coding rate; and

said rate matching comprises applying a third puncturing pattern and a fourth puncturing pattern to said at least one encoded tail bit according to the coding rate.

103. (New) The method of claim 102, wherein:

the first puncturing pattern is applied to even groups of said at least one encoded data bit;

the second puncturing pattern is applied to odd groups of said at least one encoded

data bit;

the third puncturing pattern is applied to even groups of said at least one encoded tail bit; and

the fourth puncturing pattern is applied to odd groups of said at least one encoded tail bit.

104. (New) The method of claim 103, wherein if the coding rate is 1/3, then:

the first puncturing pattern is "110";

the second puncturing pattern is "101".

105. (New) The method of claim 103, wherein if the coding rate is 1/3, then:

the third puncturing pattern is "101"; and

the fourth puncturing pattern is "101".

106. (New) The method of claim 103, wherein if the coding rate is 1/4, then:

the third puncturing pattern is "1011"; and

the fourth puncturing pattern is "1011".

107. (New) The method of claim 103, wherein if the coding rate is 1/5, then:

the first puncturing pattern is "11101";

the second puncturing pattern is "11011";

the third puncturing pattern is "11011"; and

the fourth puncturing pattern is "11011".

108. (New) An apparatus configured to implement the method of claim 87.

109. (New) The apparatus of claim 108, wherein the apparatus is a mobile station.

110. (New) The apparatus of claim 108, wherein the apparatus is a base station.

111. (New) A method comprising varying a coding rate for a communication channel according to a change in a rate at which data is input into an encoder after initial configuration of the communication channel.

112. (New) The method of claim 111, wherein said varying the coding rate is implemented at the encoder.

113. (New) The method of claim 111, wherein the encoder is a turbo encoder.

114. (New) The method of claim 111, wherein the encoder is a convolution encoder.

115. (New) The method of claim 111, wherein said varying the coding rate of the encoder comprises puncturing data encoded at a first coding rate of the encoder to effectuate a second coding rate in a puncturing block of the encoder.

116. (New) The method of claim 115, wherein:

the first coding rate is 1/5; and

the second coding rate is one of 1/2, 1/3, and 1/4.

117. (New) The method of claim 111, wherein data input into the encoder comprises at least one of an information bit, a cyclic redundancy check bit, a tail bit, and a reserve bit.

118. (New) The method of claim 111, wherein the method is implemented in at least one of variable data rate mode or flexible data rate mode.

119. (New) The method of claim 111, comprising rate matching an output of the encoder according to a size of a block interleaver.

120. (New) The method of claim 119, wherein:

said rate matching comprises applying a puncturing algorithm to the output of an

encoder for each symbol group;

each symbol group is data output from the encoder for data that is input into the encoder over a predetermined period of time;

the data output from the encoder is divided into even symbol groups and odd symbol groups; and

different puncturing patterns are applied to even symbol groups than to odd symbol groups.

121. (New) The method of claim 119, wherein:

an output of the encoder comprises at least one encoded data bit and at least one encoded tail bit;

said rate matching comprises applying a first puncturing pattern and a second puncturing pattern to said at least one encoded data bit; and

said rate matching comprises applying a third puncturing pattern and a fourth puncturing pattern to said at least one encoded tail bit.

122. (New) The method of claim 121, wherein:

the first puncturing pattern is applied to even symbol groups of said at least one encoded data bit;

the second puncturing pattern is applied to odd symbol groups of said at least one

encoded data bit;

the third puncturing pattern is applied to even symbol groups of said at least one encoded tail bit; and

the fourth puncturing pattern is applied to odd symbol groups of said at least one encoded tail bit.

123. (New) The method of claim 122, wherein if the coding rate is 1/3, then:

the first puncturing pattern is "110";

the second puncturing pattern is "101";

the third puncturing pattern is "101"; and

the fourth puncturing pattern is "101".

124. (New) The method of claim 122, wherein if the encoding rate is 1/4, then:

the third puncturing pattern is "1011"; and

the fourth puncturing pattern is "1011".

125. (New) The method of claim 122, wherein if the encoding rate is 1/5, then:

the first puncturing pattern is "11101";

the second puncturing pattern is "11011";

the third puncturing pattern is "11011"; and

the fourth puncturing pattern is "11011".

126. (New) The method of claim 119, wherein said rate matching comprises puncturing the output of the encoder.

127. (New) The method of claim 126, wherein said puncturing the output of the encoder is according to a puncturing algorithm.

128. (New) The method of claim 127, wherein the puncturing algorithm is applied to symbol groups of the output of the encoder having indices 2j and 2j+1 for $(j \bullet k) \bmod J < K$ where j=0 to J-1, $J = \lfloor I/2 \rfloor$ and $K = \lfloor (L - N) / 2 \rfloor$, I is a number of data bits per frame, L is a number of the encoded data bits, wherein the data bits include tail bits, N is the size of a block interleaver, and the encoder is a turbo encoder.

129. (New) The method of claim 127, wherein the puncturing algorithm is according to:

Pattern range	2I<N<=3I n=3		3I<N<4I n=4		4I<=N<5I n=5	
	P_0	P_1	P_0	P_1	P_0	P_1
Puncturing pattern	110	101	1101	1101	11101	11011
Tail puncturing pattern	101	101	1011	1011	11011	11011

130. (New) The method of claim 111, wherein the coding rate at the encoder is varied according to a ratio of a size of a block interleaver and a number of bits input into the encoder over a predetermined amount of time.

131. (New) The method of claim 130, wherein:

the coding rate is varied to 1/3 if the ratio is greater than 2 and less than or equal to 3;

the coding rate is varied to 1/4 if the ratio is greater than 3 and less than 4; and

the coding rate is varied to 1/5 if the ratio is greater than or equal to 4 and less than 5.

132. (New) The method of claim 131, wherein the predetermined amount of time is 20 ms.

133. (New) An apparatus configured to implement the method of claim 131.

134. (New) The apparatus of claim 133, wherein the apparatus is a mobile station.

135. (New) The apparatus of claim 133, wherein the apparatus is a base station.

136. (New) A method of processing bit streams at a communication system which has a turbo encoder having a preset code rate and an interleaver having a block size, comprising the steps of:

receiving a bit stream having a flexible data rate mode or a variable data rate mode into the encoder;

varying the preset code rate to a code rate;

coding the input bit stream with the varied code rate at the encoder; and

performing puncturing or repetition on the output of the encoder to match the block size of the interleaver.